ENGINEERING STANDARD OAK RIDGE, TENNESSEE -	NUMBER ES-2.2-1
	DATE 6-26-89
	REVISED 6-6-95
NAMEPLATES, TAGS, AND LABELS FOR INSTRUMENT ASSEMBLIES AND COMPONENTS	PAGE 1 OF 4

1. SCOPE

This standard prescribes various acceptable methods and materials used to identify instrumentation hardware or provide information regrading its use.

2. PURPOSE

The purpose of this standard is to provide specifications for procuring or designing uniform and acceptable types of nameplates, tags, and labels and their required methods of attachment to a designated item.

3. REFERENCES

Unless otherwise specified, the latest revision of all references shall be used.

A. Instrument Society of America (ISA) Recommended Practice ISA-RP60.6 (latest issue), "Nameplates, Labels, and Tags for Control Centers," Appendics A, B, and D.

B. ISA Recommended Practice ISA-RP60.8 (latest issue), "Electrical Guide for Control Centers."

4. DEFINITIONS

A. Nameplate

A nameplate displays the title and/or function of an item such as "RECYCLE VALVE LCV-4 OPEN" on a lamp, "PUMP J5" on a pump control switch, or "% FULL" on a level meter.

B. Tag

A tag displays detailed information about an item such as a wire number, instrument number, or terminal strip designation.

C. Label

A label displays detailed instructions about an item such as a caution statement or calibration procedure.

5. **GENERAL**

The preferred methods of generating nameplates, tags, and labels are given in this standard. Where the methods specified in this standard are not applicable, refer to Ref. A for guidance.

A. Nameplates

Appendix B of Ref. A shall be used as a guide when abbreviations are required on nameplates.

(1) Materials

a. Laminated Plastics

The top, or background, layer shall be white or other light shade. The core, or letter color, shall be black or other dard shade. The color scheme shall be consistent per assembly or area. Plastic nameplates shall be attached only to the instrument or panel surfaces using screws or contact cement. Clearance holes shall be large enough to prevent stressing (and cracking) the nameplates if screws are used. If pointed screws are used, the protruding points on the backside of the mounting surface shall be covered to prevent injury to personnel, but the covering shall not prevent future removal.

b. Direct Engraving

Nameplates engraved directly on metal instrument panels shall have black-filled letters. Panels shall be either a light shade of the cabinet frame or a light neutral.

c. Direct Photoetching

Photometal panels shall have flat black lettering on a clear anodized background. Panels shall be metalphoto Corp. CB-76-F core, 1100H-14 clad, and processed with a No. 4 finish or Company-approved equal.

d. Metallic Tape

Photoetched metallic tape shall be used for nameplates only inside cabinets or when there is a need to apply a nameplate directly to instrumentation, such as an in-line mounted valve. The tape shall be silver; lettering shall be black. Extreme caution must be exercised if used inside a cabinet where energized electrical circuits are present.

e. Silk Screening

This method is normally used for nameplates when a process diagram is required on an instrument panel, and the entire panel is then silk screened. Nameplates on the panel shall be black; symbols and lines on the panel shall be colored as required by the purchase specification.

(2) Lettering

Lettering shall be oriented horizontally and centered on the nameplate or the designated item. Minimum spacing between words shall be the width of the letter "E". The guidelines shown on pp. A-2 and A-3 of Ref. A shall be followed. Lettering style shall be condensed gothic. Some examples are shown in Appendix D of Ref. A.

(3) Location

Nameplate location in relation to the designated item shall be consistent throughout the design and shall leave no question as to which item is being identified. Nameplate sizes shall be uniform for items of a similar functional level or importance. Nameplates identifying groups of items or for assemblies shall be larger than for individual items.

B. Tags

(1) Wire

Each wire in an assembly shall be uniquely numbered at each end. Wire numbers shall correspond to wire numbers on the design documents. If the design does not indicate wire numbers, the fabricator shall mark the numbers on the drawings "as-built". Numbers shall be applied using a heat-stamping method directly on the insulation or on white heat-shrink tubing over the wires. Letters and numbers shall be black. Wiring manufactured with numbered insulation may be used if the numbers appear at intervals of 6 inches or less. Duplicate numbers shall not be used in any wire bundle or in the vicinity of each other in an assembly. Numbers shall be black.

Color-coded wiring may be used only for subassembly wiring or conductors within a manufactured cable. Colors used shall be marked on the design drawings and shall not be duplicated within a chassis or cable unless wires of the same color also bear a unique number.

Insulation for alternating current or direct current power conductors shall meet the color coding recommendations in Ref. B.

(2) Cable

Cables shall be tagged at each end using the heat-stamping method on the cable jacket or on white, heat-shrink tubing over the jacket. Letters and numbers shall be black. Cable numbers shall match the design drawings as in Item 1. An alternate method of cable tagging shall be using aluminum or stainless steel tags securely tied to each cable end by nonmetallic means, which is resistant to ultraviolet light and other ambient conditions, through a hole in the tag. Edges shall be smooth to prevent cutting the tie material. Metallic tags shall be engraved, stamped, embossed, or photoetched with the cable designation.

(3) Terminals

Terminals shall be tagged to match the drawings. Terminal numbers shall be applied by using the terminal manufacturer's method. This shall be either a writing strip attached to the center of the terminal strip or preprinted numbers which snap into the terminal strip. Numbers shall be legibly printed on the writing strip using a black marker.

(4) Components

Items such as terminal strips, tubing at the point of panel penetration, and instruments mounted inside enclosures shall be tagged to match their design document designation. Tags shall be in accordance with the nameplate specifications described above or as follows:

a. For components or assemblies not normally visible or not normally used for operation (such as items inside a cabinet) tags may be in the form of dry transfer or adhesive-backed lettering applied to the mounting panel adjacent to the item. Either type of lettering s hall be covered by a clear coat of lacquer for durability.

b. Field-mounted components shall be tagged using aluminum or stainless steel tags securely fastened to the component with a wire or chain thorugh a hole in the tag and shall be compatible with the expected ambient environment. Tags shall be engraved, stamped, embossed, or photoetched with the component designation.

C. Labels

Labels are special items, and their form and appearance is dependent on their function. Instructional labels shall be applied using the appropriate specifications for nameplates or tags. Warning labels regarding hazards to personnel or equipment will be considered on an individual basis by the Company.